

SLOPPED ROOF FLASHING SYSTEM AND METHOD OF USE

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BACKGROUND OF THE INVENTION

1 The present invention relates to a flashing system using a novel counter flashing and
2 method adapted for use in buildings in order to weather proof the juncture between a slopped
3 roof and a vertical parapet wall of masonry material. A gable, for example, has two vertical
4 parapet walls extending from the surface of a sloped roof forming a sloping juncture between
5 each vertical wall of the gable and its corresponding edge of the sloped roof. It is imperative to
6 seal this juncture from moisture that can penetrate the framework of the building resulting in the
7 accumulation of moisture contributing to mold growth and decay of the framework. The use of
8 roof transition flashing is therefore required. Specifically, the present invention relates to so-
9 called brick on wood applications where the vertical parapet wall is covered with a masonry wall
10 preferably of brick and mortar forming a brick veneer.

11 In the conventional method, the brick wall is constructed from the channel of a one-piece
12 J-channel flashing shaped like a squared "J". The channel has two upstanding sides, one higher
13 than the other, separated by a bottom or pan section forming the one-piece channel. The J-
14 Channel flashing is positioned at the juncture of the parapet wall and the slopping deck of the
15 roof so that the upstanding high side of the J-Channel is flush with the parapet wall, the pan or
16 bottom is flush with the slopping roof deck and the upstanding low side of the J-channel is rising
17 from the slopping deck, standing alone and opposite the upstanding high side of the J-Channel.
18 The purpose of constructing the brick wall from within the J-Channel is to direct moisture that

19 has seeped through the brick veneer into the J-channel and away from the roof by force of
20 gravity, utilizing the slop of the roof for this purpose. In order to protect the underlying parapet
21 wall from seeping moisture, a cavity is provided between the brick veneer and underlying parapet
22 wall so that moisture seeping through the brick wall flows down into the channel that acts like a
23 gutter, directing water away from the building and protecting the juncture and parapet wall from
24 exposure to the elements.

25 A roof flashing is also usually provided that is L-shaped, having a vertical leaf section
26 that is flush with the outer face of the low side of the J-Channel flashing and a horizontal section
27 that is positioned underneath the roof covering material in order to channel water that has seeped
28 into the edge of the roof covering material away from the roof, and to protect the roof deck from
29 exposure from moisture. When shingles are used to cover a slopping roof, single pieces of L-
30 shaped step flashing are frequently employed, the horizontal sections being sandwiched between
31 adjacent layers of overlapping shingles from top to bottom of the slopped roof. Therefore, when
32 the brick wall is built-up from within the J-Channel there are two upstanding sections of exposed
33 flashing protruding from the roof surface at the juncture of the brick wall and the edge of the roof
34 covering material: the vertical low side of the J-Channel flashing and the vertical leaf section of
35 the L-shaped flashing. Both are flush with each other and flush with the base of the brick wall.
36 Counter flashing, therefore, must be employed to protect these exposed flashing sections from
37 exposure to rainwater and moisture.

38 In the case of flat roof and brick wall transitions, the juncture of the brick wall and flat
39 roof edge lies on a horizontal plane, so that the counter flashing can be attached directly to the
40 same mortar joint between adjacent layers of bricks extending over the entire length of the

41 juncture. This is accomplished by laying an anchor along one such horizontal mortar joint during
42 construction of the brick wall, providing a means for attachment of a counter flashing apron
43 following construction of the brick wall. In this instance, a two element counter flashing system
44 is employed. This system, however, is not suitable in the case of slopped roof transitions because
45 the brick wall and roof edge juncture lies at an angle to the bricks instead of on a horizontal plane
46 parallel to the layout of the bricks. Because the counter flashing must be parallel to the slopping
47 juncture in order to provide effective counter flashing for the low side of the J-Channel and
48 vertical leaf section of the L-shaped roof flashing, the completed brick wall or veneer must be
49 gouged in parallel relationship to the slope of the roof and the counter flashing attached and
50 sealed in the gouge with extraneous material, such as, adhesive sealant. There are disadvantages,
51 however, that are associated with this method of counter flashing. First, the gouge in the brick
52 wall, although critical for proper attachment of counter flashing, is frequently crude where
53 cutting is performed through disparate densities of brick and mortar. Also, an adhesive sealant
54 must properly be introduced into the gouge or grove to secure and protect against moisture
55 penetration and for secure attachment of the counter flashing anchor. Furthermore, this procedure
56 extends the time for completing installation of all flashing, the construction of the brick wall
57 falling between installation of the initial flashing, including J-Channel and L-shaped roof
58 flashing, and completion of the job by attaching the counter flashing to the brick wall after its
59 construction. This requires the return of the flashing artisan to the job site. As a result, additional
60 labor and material costs are incurred. The possibility also exists that attaching the counter
61 flashing anchor and sealing it in the gouge or grove of the brick wall is performed improperly,
62 creating an opportunity for moisture penetration into the brick wall.

SUMMARY OF THE INVENTION

The object of the present invention, therefore, is to eliminate the need for the added step of installing counter flashing after construction of the brick wall. It is therefore an object of the present invention to save labor and material costs in the installation of transition flashing for slopped roofs common to many residential structures. According to the present invention, this is accomplished by interfitting specific sections of the J-Channel and L-shaped roof transition flashing with a counter flashing adapted for this purpose before constructing the brick wall. It is therefore an object of the present invention to have all necessary flashing in place prior to starting construction of the brick wall. Accordingly, a one-piece counter flashing with a flange section and a slit is provided so that the brick wall can be built from within the J-channel to include the flange section in the brick wall. The exposed transition flashing sections, such as, the low J-channel side and vertical leaf of the L-shaped roof flashing are securely fitted in the slit of the counter flashing of the present invention and thus protected from exposure. The present invention also includes a method of installing flashing that eliminates the necessity of gouging the brick wall and installing and sealing an anchor in the gouge for removable attachment of the counter flashing apron.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the flashing system according to the present invention.

FIG. 2 is a perspective view of the one-piece counter flashing according to the present invention.

FIG. 3 is a cross-sectional view of the one-piece flanged counter flashing according to the present invention.

FIG. 4 is a cross-sectional view of the flashing system and brick wall under construction.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

Referring to Fig. 2 and Fig.3, the one-piece counter flashing **10** of the present invention has a flange **16** extending laterally from the top edge **14** of the apron **12**. As shown, the flange **16** is turned downwardly upon itself in the manner of a hairpin to form a lip **18** from which a vertical planar section **20** extends downwardly in substantial parallel and spaced relationship to the apron **12** forming a slit **24**. As shown in Fig. 4, the counter flashing **10** is adapted for interfitting with a J-Channel flashing **26** and L-shaped roof flashing **36a**. Specifically, as shown in in Fig 4, the vertical leaf section **38a** of the L-shaped roof flashing **36a** is positioned flush with the outer face of the low side **30** of the J-Channel flashing **26**. Both low side **30** and vertical leaf section **38a** are securely fitted in the slit **24** so that the apron **12** overlies the vertical leaf section **38a** protecting the vertical leaf section **38a** and low side **30** from exposure to rain water. Moreover, as shown in Fig. 4, the horizontal section **40a** of the L-shaped flashing **36a** protects the roof deck **42** against any moisture seeping into the corner of the L-shaped flashing **36a** below the indented flange **22**. Accordingly, a lip **62** at the terminus of the horizontal section **40a** is provided in order to trap such moisture and insure that such moisture will run off in the

space 64 between the roof covering material and the horizontal section 40a. It is noted that the L-shaped roof flashing 36 shown in Fig. 1 is a plurality of step flashing units, the vertical leaf sections 38 protruding above the edge of the shingles 56 while the underlying horizontal sections 40 are sandwiched between adjacent layers of shingles 58 from top to bottom of the sloped roof 48. The L-shaped roof flashing 36 can also be fabricated to form the single unit of L-shaped flashing 36a in Fig 4, extending the length of the juncture, having a continuous vertical leaf section 38a upstanding at the edge of the roof covering material 44 and a continuous horizontal section 40a positioned between the roof covering material 44 and roof deck 42.

Once the flashing units are in position and fitted together, the system according to the present invention is complete and construction of the brick wall can begin. The wall is built up from within the J-channel 28 as shown in Fig. 4, forming a brick veneer over the underlying parapet wall 50, usually made of framed wood covered by protective sheathing 52. As shown therein, the flange 16 is included between layers of bricks 46 in the wall during its construction. A cavity 54 is provided extending vertically from within the J-channel 28 between the bricks 46 and the parapet wall 50, so that moisture that has seeped through the brick veneer can migrate down the interior of the veneer inside the cavity 54 to the surface of the pan section 34 of the J-channel 28. The J-Channel 28 therefore serves as a gutter allowing moisture to run off due to the slope of the roof 48. The J-channel 28 itself is formed by the high side 32 of the J-Channel flashing 26 flush with the parapet wall 50, and the low side 30 separated by the pan section 34 that forms the bottom section of the J-channel 28. As shown in Fig. 4, a flange 60, extending from the top edge of the low side 30 at an angle to the outer face of the low side 30 and over the

vertical leaf section **38a** is provided to guard against migrating moisture. Specifically, the flange **60** guards against moisture that has seeped into cavity **54** and downward into J-Channel **28** from migrating from the J- channel **28** to the interface between the outer face of the low side **30** and the vertical leaf section **38a** that is flush with the low side **30**.

In the initial construction of the masonry wall from within the channel **28**, the bricks **46** must be mitered to account for the angle of the slopped roof **48** because the brick wall is constructed on a horizontal plane as shown in Fig. 1. When the brick wall has been constructed, only the apron **12** of the one-piece counter flashing **10** is visible and aesthetically pleasing.

Each unit of flashing system of the present invention is preferably made from fabricated sheet metal that is cut, bent, folded and shaped accordingly. The counter flashing **10** of the present invention is preferably made of one piece of sheet metal, although other suitable material can be used. The interior of the J-Channel flashing **26** and J-Channel **28** is preferably coated with a polymeric material, such as, a commercially available rubber-based material known as "Carsile" to protect against mold growth.

According to the method of the present invention, the separate step of installing the counter flashing after the brick veneer has been constructed is eliminated by assembling and installing all flashing units comprising the system of the present invention before beginning construction of the brick veneer, thus avoiding the necessity of gouging the veneer to form a groove for attaching the counter flashing. This is accomplished by the flanged counter flashing **10** and slit **24** specifically fabricated for fitting with the J-Channel flashing **26** and L-shaped roof flashing **36**. When properly positioned, the flange section **16** will extend partially over the

148 J-Channel 28 as shown in Fig. 1 and Fig. 4 to be included as an integral component in the brick
149 veneer.

150 The invention has been described with reference to the preferred embodiment.

151 Obviously, modifications and alterations will occur to others upon reading and understanding
152 the preceding detailed description. It is intended that the invention be construed as including all
153 such modifications and alterations insofar as they come within the scope of the appended claims
154 or the equivalents thereof.